

Appl. No. 09/922,065
Resp./Amtd. dated Oct. 14, 2005
Reply to Office Action of 07/27/2005

REMARKS/ARGUMENTS

There are no amendments to the specification or drawings herein.

In the Claims, Claims 1-11, 13, 14, 16, 17, 19, 20 and 22-34 are pending. Claims 19, 20, 22 and 31-34 are allowed. Claims 1, 5 and 23-28 are rejected and Claims 2-4, 6-11, 13, 14, 16, 17, 29 and 30 are objected to. Reconsideration is respectfully requested.

The Examiner withdrew a previous indication of allowability of Claims 23-26 and rejected Claims 23-26 under 35 U.S.C. 112, second paragraph, for lack of antecedent basis. In particular, the Examiner contended that there was insufficient antecedent basis for the claim term and limitation "the added phase noise $\mathcal{L}_{SA}(f_m)$ ".

Applicant agrees with the Examiner that the term "added phase noise $\mathcal{L}_{SA}(f_m)$ " in Claim 23 lacked proper antecedent basis as originally filed. Applicant has amended Claim 23 to correct this minor typographical error. In addition, the amendment of Claim 23 corrects two additional informalities therein. No new matter is added.

Applicant respectfully requests entry and consideration of the amendments to Claim 23 presented above. Applicant further requests withdrawal of the rejection of Claims 23-26 under 35 U.S.C. 112, second paragraph, in light of Applicant's amendments. It is respectfully submitted that the correction of these minor typographical errors does not change the scope of Claims 23-26, as originally filed.

Applicant has amended Claim 32 to correct a minor informality in the claim's preamble. No new matter is added and the amendment does not affect the scope of Claim 32. Entry and consideration of the amendment to Claim 32 is respectfully requested.

The Examiner rejected Claims 1, 5, 27 and 28 under 35 U.S.C. 102(e) as being anticipated by Chen et al., U.S. Patent No. 6,246,717 (hereinafter 'Chen et al.'). The Examiner relied on Figures 4 and 6, selected text from Col. 7, and Col.12 through Col. 14 of Chen et al. to support a contention that Chen et al. disclose that claimed by Applicant in Claims 1, 5, 27 and 28.

Applicant respectfully traverses the rejection on the grounds that a *prima facie* case of anticipation with respect Claims 1, 5, 27 and 28 has not been established. In particular, Applicant submits that the Examiner failed to show that Chen et al. disclose, explicitly or implicitly, "each element of the claim under consideration"

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(*W.L. Gore & Associates v. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983)) and that Chen et al. disclose the claimed elements "arranged as in the claim" (*Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)) as required by the Federal Circuit for a finding of *prima facie* anticipation under 35 U.S.C. 102.

For example, Chen et al. disclose estimating and removing a nonlinear phase error followed by estimating a phase noise variance and suppressing additive noise and induced phase noise for a signal *before* the signal in question is applied to an input of, or is processed by, a disclosed spectrum analyzer. The aforementioned 'estimating and removing' and 'estimating and suppressing' depend on signal characteristics that are independent of and unrelated to the disclosed spectrum analyzer.

In particular, in FIG. 4, elements 60, 62, 64 and 66, as well as Col. 7, lines 41-56, and Col. 14, lines 27-61 of Chen et al., relied upon by the Examiner, Chen et al. disclose a "nonlinear phase error estimator 60", "nonlinear phase error remover 62", a "phase noise variance estimator 64", an "additive noise induced phase noise suppressor 66", and a "spectrum analyzer 67". According to Chen et al., "the phase detector 54 is coupled to the nonlinear phase error estimator 60 and to the nonlinear phase error remover 62" (Chen et al., Col. 7, lines 41-43). In turn, "[t]he output of the nonlinear phase error remover 62 is coupled to a phase noise variance estimator 64 and an additive noise induced phase noise suppressor 66" (Chen et al., Col. 7, lines 45-47). According to Chen et al., the "spectrum analyzer 67" is located *after* the "additive noise induced phase noise suppressor 66" and "*receives the resultant* carrier phase noise from the additive phase noise suppressor 66 and generates power spectrum values of the phase noise" (*emphasis added*) (Chen et al., Col. 7, lines 53-55, and FIG. 4). No alternative location or function for the "spectrum analyzer 67" is disclosed or suggested.

Contrary to the Examiner's contention, Chen et al. fail to disclose or suggest that claimed by Applicant in Claim 1 at least because the disclosed "nonlinear phase error estimator 60", "nonlinear phase error remover 62", "phase noise variance estimator 64", "additive noise induced phase noise suppressor 66", all operate on a signal which has not yet passed through a spectrum analyzer (e.g., the disclosed "spectrum analyzer 67"). Furthermore, each of the aforementioned elements 60, 62, 64 and 66

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specifically employ phase noise characteristics of the signal (i.e. either producing or employing produced estimates of nonlinear phase error and phase noise variance) that are independent of and unrelated to the disclosed "spectrum analyzer 67". Moreover, Chen et al. do not recognize that the "spectrum analyzer 67" contributes an added phase noise to the signal and never suggest a correction for or a removal of such an added phase noise.

Clearly for these reasons, Chen et al. do not and respectfully cannot disclose "mathematically removing an added phase noise $\mathcal{L}_{SA}(f_m)$ value *contributed by the spectrum analyzer* from the measured phase noise $\mathcal{L}(f_m)$ value of the SUT", as recited in Applicant's Claim 1. Similarly, at least for having failed to disclose either an added phase noise contributed by the spectrum analyzer or correcting for such an added phase noise, Chen et al. fail to disclose or suggest that recited in Applicant's Claim 27.

Hence, Chen et al. fail to disclose either "each element of the claim under consideration" (*W.L. Gore & Associates v. Garlock*, cited *supra*) or the claimed elements "arranged as in the claim" (*Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, cited *supra*) as required for establishing *prima facie* anticipation. Furthermore, Claim 5 is dependent from and includes all of the limitation of independent base Claim 1, while Claim 28 is dependent from and includes all of the limitations of independent base Claim 27. Having failed to establish *prima facie* anticipation with respect to the base claims, the Examiner similarly has failed to establish *prima facie* anticipation of dependent Claims 5 and 28 for at least the reasons presented above with respect to Claims 1 and 27. Applicant respectfully submits that the rejection of Claims 1, 5, 27 and 28 under 35 U.S.C. 102(e) with respect to Chen et al. lacks proper support and therefore must be withdrawn. Reconsideration and withdrawal of the rejection are respectfully requested.

Applicant appreciates the allowance of Claims 19, 20, 22 and 31-34. Further, Applicant appreciates the Examiner's acknowledgement of the allowability of Claims 2-4, 6-11, 13, 14, 16, 17, 29 and 30 if rewritten in independent form including all of the limitations of the base claim and any intervening claim. However, in light of


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Applicant's remarks above, Applicant respectfully declines to rewrite Claims 2-4, 6-11, 13, 14, 16, 17, 29 and 30 at this time and requests reconsideration.

In summary, Claims 1-11, 13, 14, 16, 17, 19, 20 and 22-34 are pending. Claims 1, 5 and 23-28 were rejected. Claim 23 is amended herein. For the reasons detailed above, it is respectfully submitted that rejected Claims 1, 5 and 23-28, as presented herein, as well as objected to Claims 2-4, 6-11, 13, 14, 16, 17, 29 and 30 are in condition for allowance. It is respectfully requested that Claims 1-11, 13, 14, 16, 17 and 23-30 be allowed along with Claims 19, 20, 22 and 31-34, and that the application be passed to issue at an early date.

Should the Examiner have any questions regarding the above, the Examiner is urged to contact the undersigned by telephone at the number given below or John L. Imperato, Attorney for Applicant, Registration No. 40,026 at Agilent Technologies, Inc., telephone number (650) 485-5511.

Respectfully submitted,
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CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on the date shown below.


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10/14/05
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